

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 February 2005 (17.02.2005)

PCT

(10) International Publication Number
WO 2005/015523 A1

(51) International Patent Classification⁷: **G09B 23/14**, 21/00

(21) International Application Number:
PCT/GB2004/003426

(22) International Filing Date: 6 August 2004 (06.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0318531.1 7 August 2003 (07.08.2003) GB

(71) Applicant (for all designated States except US): **SONIC AGE LTD** [GB/GB]; 56 Willow Way, Ponteland, Newcastle upon Tyne Tyne and Wear NE20 9RF (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **REID, John** [GB/GB]; Crystal Cottage, St John's in the Vale Cumbria CA12 4TS (GB).

(74) Agents: **HACKNEY, Nigel** et al.; Mewburn Ellis LLP, York House, 23 Kingsway, London, Greater London WC2B 6HP (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MT, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

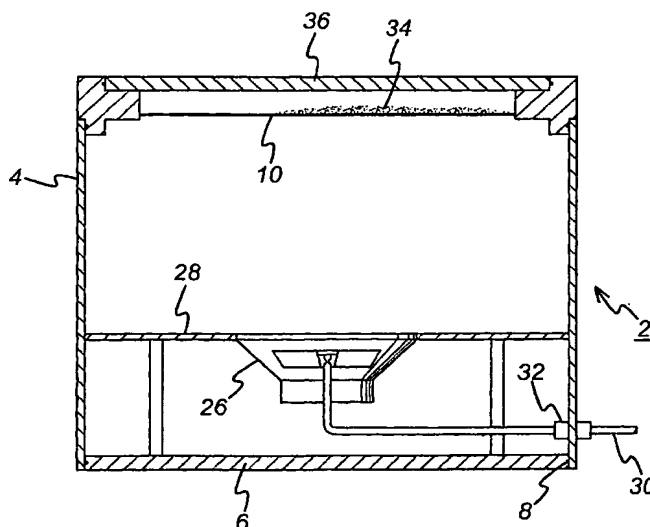
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **ELECTRO-ACOUSTIC DEVICE FOR CREATING PATTERNS OF PARTICULATE MATTER**



(57) Abstract: An electro-acoustic device for creating patterns of particulate matter comprises a housing (2) one end of which is closed and the other end of which is open, a diaphragm (10) extending across the housing (2) at or adjacent the open end of the housing to define and close a hollow interior to the housing, a mass of particulate matter (34) located on the diaphragm (10), and, within the hollow interior of the housing (2), an electro-acoustic transducer (26), the arrangement being such that, in use with the diaphragm (10) extending horizontally and on activation of the transducer (26) by an audio signal, the acoustic output therefrom excites the diaphragm (10) and creates a pattern in the particulate matter (34) thereon representative of the audio signal.

WO 2005/015523 A1